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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,065	07/10/2006	Dirk Cornelis Gerhardus De Boer	NLO40096	5435
24737 7590 04/25/2008 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
FINEMAN, LEE A				
ART UNIT		PAPER NUMBER		
2872				
MAIL DATE		DELIVERY MODE		
04/25/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/597,065

Applicant(s)

DE BOER ET AL

Examiner

LEE FINEMAN

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____
- Paper No(s)/Mail Date ____

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the absorbing polarizing layer and the

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polarizing mirror at its non-viewing side both comprising a retarder layer (claim 4) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 20', 20", 35, 36.

4. The drawings are objected to because in fig. 1 the reference sign 3' referring to the person should --3--.

5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities: The specification is missing section headings.

Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

7. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 4 and 5 include the limitation “the absorbing polarizing layer and the polarizing mirror at its non-viewing side both comprising a retarder layer (35, 36) which rotates the polarization over substantially 45 degrees” which is not included in the disclosure and/or drawings.

Claim Objections

8. Claims 1-11 are objected to because of the following informalities:

Regarding claims 1 and 4, the limitations include reference signs not listed in the drawings (20', 20", 35, 36).

Regarding claims 2-11, the limitations “a retardation layer,” “at least two retardation layers,” “the retardation layer,” “two retardation layers,” “a first and second retardation layer” and “the retarder layers” are confusing. Claim 1, from which all these claims depend, includes the limitation “at least one retardation layer.” None of the limitations listed above directly refer the limitation as cited in claim 1 so it is unclear whether they are the same or different retardation layers. Since the reference signs noted are the same for each limitation they will be taken to be the same retardation layers as cited in claim 1.

Regarding claim 11, the limitation “at least one of the retarder layers being broad band retarders is grammatically incorrect (tense does not match).

The dependent claims inherit the deficiencies of the claims from which they depend. Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation “the absorbing polarization layer.” There is insufficient antecedent basis for this limitation in the claim. Further, as the claim also includes limitations (retarder layer (35, 36) lacking any description in the specification and drawing (see objections to the specification above), the claim is considered indefinite because all these issues create uncertainty as to metes and bounds of the claim. The dependent claims inherit the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Horsten et al., WO 03/079318 (henceforth Horsten).

Regarding claim 1, Horsten discloses in figs. 3-4 and 7b a polarizing mirror (2) for viewing purposes having a first plane (2) reflecting light of a first kind of polarization (20'' or 35'') to a viewing side (figs. 4-5 and 7), the mirror passing light of a second kind of polarization (20' or 35') and being provided with a display device (11) at its non-viewing side, (fig. 3) which display device (11) during use provides light of the second kind of polarization (figs. 4 or 7b), at least one retardation layer (12 or 25) being provided between the display device and the polarizing mirror (figs. 3-4 and 7b). .

Regarding claims 2, 6 and 9, Horsten discloses the orientation direction of a retardation layer (12 or 25) being at substantially 22.5 degrees (quarter wave plate, 25) or 45 degrees with respect to the polarization direction of the polarizing mirror (half wave plate, 12); wherein the retarder layer comprises a $\frac{1}{4} \lambda$ foil (25, fig. 7b and page 7, line 15) and having the orientation direction of the retardation layer (12) along the bisector of the polarization directions of the polarizing mirror and the display device (fig. 4).

Regarding claims 3-5, Horsten discloses in fig. 7b at least two retardation layers (25 and page 7, line 15) being provided between the display device and the polarizing mirror. Regarding claims 4-5, in as much as the claims are able to be understood in light of the 35 U.S.C 112 rejection made above the rejection applies.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 7, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horsten.

Horsten further discloses wherein the retarder layer comprises a $\frac{1}{2} \lambda$ foil (12). Horsten discloses the claimed invention except for explicitly stating having two retardation layers between the display device and the polarizing mirror which each rotate the polarization over substantially 90 degrees and having the orientation directions of a first and a second retardation layer along $\frac{1}{4} \alpha$ and $\frac{3}{4} \alpha$ in which α is the angle between the polarization directions of the polarizing mirror and the display device. However, one of ordinary skill would understand the equivalence of using more retardation layers with different angles between angle between the polarization directions of the polarizing mirror and the display device, yet maintaining the final polarization involves only routine skill in the art. One would have been motivated to add more retardation layers to further prevent stray light.

15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horsten in view of Zeidler, US 5,268,775.

Horsten discloses the claimed invention except for explicitly stating that at least one of the retarder layers is a broad band retarder. Zeidler discloses that it is very well known to use broad band retarders in optical systems (see at least the abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make at least one of the retarder layers is a broad band retarder to encompass a larger wavelength range for the specific intended application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE FINEMAN whose telephone number is (571)272-2313. The examiner can normally be reached on Monday - Friday 8:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephon B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lee Fineman/
Patent Examiner, Art Unit 2872
18 April 2008